

Financial analysis for garment cleaners: Implications of participating in the TURA program

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Background. The TURA program is currently considering the possibility of designating perchloroethylene (PCE) as a higher hazard substance. If PCE were designated as a higher hazard substance, facilities in SIC codes covered by TURA that use more than 1,000 pounds of PCE per year, and have 10 or more employees, would be required to report annually on their use of PCE, pay a fee, and prepare a toxics use reduction plan every two years. In this context, questions have been raised regarding the possible financial impacts of this requirement on dry cleaners that use more than 1,000 pounds of PCE per year and have 10 or more employees.

Financial profile of the garment cleaning sector. Financial information on the garment cleaning industry is available from US Census data, the Bureau of Labor Statistics (BLS), and the Harris Selectory database. In addition, the US EPA and the State of California have conducted financial analyses of the sector.

- In 2002, the most recent year for which US Census data are available, dry cleaning facilities in Massachusetts had average receipts of \$380,695 per plant, or average receipts of \$51,695 per employee. These facilities had an average of 7.4 paid employees, with an average payroll of \$20,334 per employee (all figures updated to 2008\$).¹
- Information on wages in the garment cleaning industry is also available from the Bureau of Labor Statistics (BLS). In 2006, the mean hourly wage nationwide for all occupations in NAICS 812300 (Drycleaning and laundry services) was \$12.91, and the mean annual wage was \$26,857 (all figures updated to 2008\$).²
- The Harris Selectory database also provides information on sales by Massachusetts dry cleaners. For facilities listed in the Harris Selectory as having 7 to 12 employees, the average annual sales amount is \$340,908.
- In July 2006, the US EPA published an economic impact analysis of the PCE dry cleaning residual risk standard.³ In this analysis, EPA uses a cost-to-sales ratio to calculate the economic impact of federal regulations on dry cleaners, concluding that the impact will be small. (See further discussion below.)
- In addition to other operating costs, cleaners that use GreenEarth brand silicone-based cleaning technology pay an annual “affiliation fee” of \$2,500 per machine using GreenEarth.⁴

Costs of participating in the TURA program. The costs of participating in the TURA program consist of the annual fee, annual costs of completing a Toxics Use Report (Form S), and the cost of developing a TUR plan every two years.

- *Fee.* Under the current fee structure, a facility with 10 to 50 employees, using one reportable chemical above threshold, would pay a base fee of \$1,850 plus a per-chemical fee of \$1,100 for a total of \$2,950. The TURA Council will be evaluating the overall TURA fee structure in the future, which may lead to lower fees for the smallest facilities.
- *Reporting.* Dry cleaners already report their use of toxic chemicals to the Environmental Results Program. Only minor changes would be necessary in order for this information to be made consistent with that ordinarily submitted by TURA filers. However, if dry cleaners are required to fill out separate forms for the two programs, some additional time will be required to fill out and submit the toxics use report.
- *Planning.* The cost of developing a TUR plan depends on the size of the facility, the number of chemicals and production units included in the plan, and the complexity of the plan.⁵ For dry cleaners reporting a single chemical, the planning process would be relatively simple, especially if the program were to develop a model plan that cleaners could simply modify to meet their individual needs. We estimate a range of possible costs, depending on consulting and training fees. These range from just under \$500 to just over \$800 per two-year planning cycle, assuming that the TURA program provides some services to facilitate the planning process for dry cleaners; or could be over \$2,600 per two-year planning cycle if the program does not provide such services (see calculations in Appendix A). Different assumptions about the model plan could yield lower or higher estimated costs.

The US EPA analyzes the expected effects of regulations on dry cleaners using a cost-to-sales ratio. EPA's 2006 analysis of the final PCE dry cleaning residual risk standard calculates that only a small number of firms will incur costs of more than 1% of sales in complying with the residual risk standard. Using EPA's approach, it is possible to estimate a cost-to-sales ratio for participation in the TURA program.

Using the US census data, annual receipts at an average dry cleaning facility are equal to \$380,695. This figure corresponds to a facility with 7.4 paid employees. Based on this number of employees, the average facility would not be subject to TURA. However, an industry association has argued that facilities may have more full-time equivalents as defined by TURA than they report in existing government and business databases.⁶ Thus, for the purposes of this calculation, we assume that TURA requirements would apply to a facility of this size.

To estimate annual costs of complying with TURA requirements, we add the annual fee to one half of the planning costs that facilities would face every two years. Annual costs would range from about \$3,200 to \$3,400 if the TURA program provides some services to help dry cleaners with the planning process; or could be as high as about \$4,300 if the program does not provide such services. Thus, the cost-to-receipt ratio for a facility with 7.4 paid employees would range from to just under 1% to just over 1%. (See calculations in Appendix A.) This estimated ratio will be lower for larger facilities. Changes to the

TURA fee structure to lower costs for the smallest TURA filers may also decrease this ratio.

Opportunities for facilities participating in the TURA program. According to an industry representative, about 30 new garment cleaning machines are purchased each year in Massachusetts; most of these are for non-PCE processes.⁷ This statistic indicates that Massachusetts garment cleaners are actively shifting away from PCE, making it particularly important to provide assistance in identifying the best alternatives and adopting them successfully.

Shifting to wet cleaning is a practical option for some facilities. A study conducted in California found that cleaners were able to reduce operating costs when they shifted from PCE to dedicated wet cleaning. The cleaners who participated in this study had the benefit of a state-sponsored demonstration project that helped them to make the transition smoothly. The authors note that the elements of this demonstration project (outreach, training, financial and technical assistance, and the development of a supporting infrastructure in the region) were essential for these successful transitions.

The study provides detailed cost information for four sample facilities. These facilities achieved savings ranging from 23% to 48% in monthly process-dependent operating costs, including the monthly costs of the initial capital investment in equipment. Their labor costs were unchanged.⁸ Information on two of these facilities is shown in Appendix B.

Based on the savings recorded at the sample facilities in California, over the course of a year, a facility with annual (non-labor) process-dependent operating costs of \$15,000 could save \$3,450 to \$7,200 by switching to wet cleaning.

More generally, the experience of the TURA program indicates that facilities that are required to report and plan frequently identify options to reduce or eliminate their use of toxic substances while simultaneously achieving financial benefits. The 1997 TURA program evaluation found that in its first five years, the TURA program produced net economic benefits for the regulated community and for the Commonwealth as a whole.

California's Non-Toxic Dry Cleaning Incentive Program. In California, the Air Resources Board assesses a fee on the distributors that sell PCE to dry cleaners. The fee is designed both to create an incentive for cleaners to shift to safer alternatives, and to fund services to help cleaners in making the transition. The fee was set at \$3 per gallon in 2004, and increases one dollar per gallon per year from 2005 to 2013. Thus, for example, a facility using 100 gallons of PCE would pay \$700 in fees in 2008, and \$800 in 2009. Most of the funds collected through this fee are used to provide \$10,000 grants "to assist dry cleaners in switching from Perc to non-toxic and non-smog forming cleaning technologies such as water-based cleaning and carbon dioxide (CO₂) cleaning."⁹

Summary. Assuming that the TURA program provides assistance to facilitate the planning process, the costs of participating in the program are relatively small in relation

to total receipts of a typical garment cleaner. Changes to the TURA fee structure could make these costs even smaller. In addition, facilities that shift to wet cleaning may achieve savings in operating costs that are greater than or equal to the costs of participation in the program.

Appendix A: Calculations

i. Costs of TUR planning per two-year planning cycle

The cost of TUR planning can be estimated based on three components: labor hours required; hourly wage rates; and external consulting fees. Below, we show sample calculations.

Scenario 1. For all scenarios, we assume that the average hourly wage for all employees is just under \$13/hour (based on the BLS wage data). In the first scenario, we also assume that: (a) the TURA program provides a model plan to help guide facilities; (b) facilities are allowed to complete the plan during a day-long training course to which they bring their facility-specific equipment and cost information; (c) the plan is certified by a TUR planner at the training course; and (d) the facility devotes three 8-hour person-days to the planning process. This approach to TURA planning would have to be evaluated for viability and consistency with program goals on several dimensions, but it is presented here as a lower bound for possible planning costs. Using this scenario, we estimate planning costs of slightly under \$500 per two-year planning cycle.

Dry Cleaner: Estimated planning costs			
(Assumes model plan & training course)			
Personnel costs			
Average hourly wage	\$	13	
Planning hours per year		24	
Total personnel costs	\$		310
Training/certification fee	\$		175
Total	\$		485

Scenario 2. In the second scenario, we assume that the TURA program provides a model plan to guide facilities, and that each facility pays a consultant \$500 (assuming approximately 5 hours at \$100/hr) to review and certify its TUR plan. Assumptions about total personnel costs are the same as in the first scenario. Using this scenario, we estimate planning costs of just over \$800 per two-year planning cycle.

Dry cleaner: Estimated planning costs			
(Assumes model plan & use of consulting services)			
Personnel costs			
Average hourly wage	\$	13	
Planning hours per year		24	
Total personnel costs			\$ 310
Consulting fees			\$ 500
Total			\$ 810

Scenario 3. In the third scenario, we assume that facilities do not benefit from either a model plan or a training course, and that each facility hires a TUR planner to provide individualized help with the planning process. We assume that the facility would devote six person-days to the process. For a small facility using a single chemical and considering a limited number of alternatives, we estimate that a planner would charge \$2,000 for the necessary services. Using this scenario, we estimate planning costs of just over \$2,600 per two-year planning cycle.

Dry Cleaner: Estimated planning costs			
(Assumes no model plan or training course)			
Personnel costs			
Average hourly wage	\$	13	
Planning hours per year		48	
Total personnel costs	\$		620
Consulting fees	\$		2,000
Total	\$		2,620

ii. Annual costs of TUR planning + fee

To estimate annual costs of complying with TURA requirements, we add the annual fee to one half of the planning costs that facilities would face every two years. Thus, annual costs would range from about \$3,200 to \$3,400 if the TURA program provides some services to help dry cleaners with the planning process; or could be as high as about \$4,300 if the program does not provide such services. Thus, the cost-to-receipt ratio for a facility with 7.4 paid employees would range from to just under 1% to just over 1%.

Calculation of annual costs and costs-to-receipts ratio					
Scenario		1	2	3	
Planning costs (every 2 yrs)		\$ 485	\$ 810	\$ 2,620	
Annual planning costs		\$ 243	\$ 405	\$ 1,310	
Fee (every year)		\$ 2,950	\$ 2,950	\$ 2,950	
Annual costs (planning + fee)		\$ 3,193	\$ 3,355	\$ 4,260	
Annual receipts (facility w/ 7.4 paid employees)	\$380,695				
Costs-to-receipts ratio		0.8%	0.9%	1.1%	

Appendix B: Monthly process-dependent costs at sample California facilities

Sample facilities: Process-dependent costs per month				
	“San Clemente”		“1 Day”	
Monthly expenses	Dry cleaning	Wet cleaning	Dry cleaning	Wet cleaning
Equipment	\$430	\$208	\$299	\$208
Machine maint.	\$147	\$24	\$239	\$24
Filters	\$60	\$0	\$25	\$0
Solvent	\$50	\$0	\$100	\$0
Detergent	\$53	\$121	\$16	\$246
Haz. waste	\$100	\$0	\$54	\$0
Regulatory fees	\$108	\$0	\$108	\$0
Water	\$44	\$34	\$20	\$30
Electricity	\$89	\$50	\$143	\$115
Gas	\$278	\$266	\$466	\$510
Total	\$1359	\$703	\$1470	\$1133
Difference (\$)	- \$656		-\$337	
Difference (%)	-48%		-23%	
Source: P. Sinsheimer et al., “The Viability of Professional Wet Cleaning as a Pollution Prevention Alternative to Perchloroethylene Dry Cleaning,” <i>Journal of the Air and Waste Management Association</i> 57 (February 2007): 172-178.				

¹ US Census Bureau, 2002 Economic Census, “Other Services: Massachusetts: NAICS Code 8123202: Drycleaning plants,” available at http://www.census.gov/econ/census02/data/ma/MA000_81.HTM#N812, viewed March 2008. All figures have been converted from 2002\$ to 2008\$ using the CPI inflation calculator figure (1.18).

² US Department of Labor Bureau of Labor Statistics (BLS): Occupational Employment Statistics: May 2006 National Industry-specific Occupational and Wage Estimates for NAICS 812300 (Dry Cleaning and Laundry Services). Available at http://www.bls.gov/oes/current/naics4_812300.htm, viewed March 2008. The BLS calculates the mean annual wage by multiplying the mean hourly wage by a year round, full time figure of 2,080 hours. 2006 figures: mean hourly wage \$10.94, mean annual wage was \$22,760; converted from 2002\$ to 2008\$ using the CPI inflation calculator figure (1.18).

³ US EPA, *Economic Impact Analysis of the Perchloroethylene Dry Cleaning Residual Risk Standard* (EPA 452/R-06-005, July 2006). Available at

<http://www.epa.gov/ttnecas1/regdata/EIAs/eiafinalpercdrycleanersresidrisk.pdf>, viewed March 2008. Under the Clean Air Act, the US EPA is directed to assess the remaining risk (residual risk) after application of Maximum Achievable Control Technology (MACT) standards, and to promulgate additional standards if necessary. EPA is also required to review and revise MACT standards every eight years, as necessary.

⁴ GreenEarth Cleaning fact sheet, available at <http://www.greeneearthcleaning.com/developer/factsheet.asp>, viewed March 2008.

⁵ According to an estimate developed by the TURA program in 1997 (updated to 2007\$), the average cost of developing a facility’s first TUR plan is \$13,345 and the average cost of subsequent TUR plans is \$7,796. However, this figure is based on the costs faced by all TURA filers of all sizes using chemicals

above a 10,000 or 25,000 pound threshold, so these figures are not useful for estimating the costs faced by dry cleaners.

⁶ Peter Blake, Northeast Fabricare Association, personal communication, February 2008. According to this argument, employees at dry cleaning facilities may work more hours than they are paid for; thus, if they report actual hours worked rather than hours of paid work, the total number of person-hours reported per year may be higher than those recorded in existing databases.

⁷ Peter Blake, Northeast Fabricare Association, personal communication, March 2008.

⁸ P. Sinsheimer et al., "The Viability of Professional Wet Cleaning as a Pollution Prevention Alternative to Perchloroethylene Dry Cleaning," *Journal of the Air and Waste Management Association* 57 (February 2007): 172-178. Among the four California case study facilities, average monthly process-dependent operating costs (not including labor) were equal to \$1,227. For 12 months, this totals \$14,718. Thus, we chose \$15,000 as a sample annual process-dependent operating cost. The savings at the four California case study facilities ranged from 23% to 48% per month. Applying these percentages, we estimate possible savings ranging from \$3,450 to \$7,200 annually.

⁹ California Environmental Protection Agency Air Resources Board, Non-Toxic Dry Cleaning Incentive Program (AB998), information available at <http://www.arb.ca.gov/toxics/dryclean/ab998.htm>, viewed March 2008.